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<p>(21) International application number: PCT/FR98/01400</p> <p>(22) International filing date: 30 June 1998 (30.06.98)</p> <p>(30) Data relating to the priority: 97/08,233 30 June 1997 (30.06.97) FR 60/067,488 1st December 1997 (01.12.97) US</p> <p>(71) Applicants (for all designated States except US): RHONE-POULENC RORER S.A. [FR/FR]: 20, avenue Raymond Aron, F-92160 Antony (FR). INSTITUT GUSTAVE ROUSSY [FR/FR]: 39, rue Camille Desmoulins, F-94805 Villejuif (FR). CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE [FR/FR]: 3, rue Michel Ange, F-75016 Paris (FR).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (US only): Michel BUREAU [FR/FR]: 1, square Sainte Clothilde, F-92210 Saint Cloud (FR). Lluis MIR [FR/FR]: 22, allée des Vaupépins, F-91370 Verrières le Buisson (FR). Daniel SCHERMAN [FR/FR]: 10, rue Erard, F-75012 Paris (FR).</p> <p>(74) Representative: Roxane DERNONCOUR; Rhône-Poulenc Rorer S.A., Patents Directorate, 20, avenue Raymond Aron, F-92165 Antony Cedex (FR).</p>	<p>(81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GM, HU, ID, IL, IS, JP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ARIPO Patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European Patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI Patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published With the International Search Report. Before expiry of the period provided for amending the claims, will be republished if such amendments are received.</p> <div style="text-align: right; margin-top: 20px;">  </div>	
As printed		
<p>(54) Title: IMPROVED METHOD FOR TRANSFERRING NUCLEIC ACID INTO THE STRIPED MUSCLE AND COMBINATION THEREFOR</p> <p>(54) Titre: AMELIORATION DU TRANSFERT D'ACIDE NUCLEIQUE DANS LE MUSCLE STRIE ET COMBINAISON PERMETTANT LA MISE EN OEUVRE DU PROCEDE</p> <p>(57) Abstract</p> <p>The invention concerns an improved method for transferring <i>in vivo</i> into the cells of striped muscles nucleic acids or nucleic acids combined with products for enhancing the efficacy of such transfers. The invention also concerns the combination of a nucleic acid and the transfer method for use in gene therapy.</p> <p>(57) Abrégé</p> <p>La présente invention se rapporte à une amélioration du transfert <i>in vivo</i> dans les cellules des muscles striés d'acides nucléiques ou d'acides nucléiques associés à des produits permettant d'augmenter le rendement de tels transferts, et à la combinaison d'un acide nucléique et du procédé de transfert selon l'invention pour leur utilisation en thérapie génique.</p>		

ABSTRACT

The invention provides a method of transferring *in vivo* a molecule into a striated muscle cell. More specifically, a method of the invention comprises contacting *in vivo* a striated muscle cell with a molecule, and electrically stimulating the muscle cell with one or more unipolar pulses of an electric field intensity ranging from 1 to 800 V/cm². In one embodiment, the molecule is a nucleic acid encoding a protein of interest. For example, the invention provides methods of promoting angiogenesis and hemostasis.

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